Iowa Department of Transportation

MINUTES
OF
IOWA DOT SPECIFICATION COMMITTEE MEETING

March 10, 2005

Members Present:	Tom Reis, Chair	Specifications Section
	Keith Norris	District 2 -Materials Office
	Gary Novey	Office of Bridges & Structures
	John Smythe	Office of Construction
	Roger Bierbaum	Office of Contracts
	Doug McDonald	District 1 - Marshalltown RCE Office
Members Not Present:	John Adam, Director	Statewide Operations Bureau
	Bruce Kuehl	District 6-Dist. Const. Engineer
	Mike Kennerly	Office of Design
	Larry Jesse	Office of Local Systems
	Jim Berger	Office of Materials
	Troy Jerman	Office of Traffic & Safety
Advisory Members Present:	Lisa Rold	FHWA
Advisory Members Not Present:	Jim Rost	Office of Location & Environment
	Larry Stevens	SUDAS
Others Present:	Daniel Harness, Secretary	Specifications Section
	LeRoy Bergman	Office of Local Systems
	Dave Matulac	Office of Design
	Todd Hansen	Office of Materials
	Kevin Jones	Office of Materials
	Vanessa Goetz	Office of Materials
	Ole Skaar	Office of Design

Tom Reis, Specifications Engineer, opened the meeting. The following items were discussed in accordance with the March 9, 2005 revised agenda:

1. Article 2301.04, E, Use of Fly Ash.

The Office of Materials requests a change to Article 2301.04 that will clarify the maximum substitution rate for mineral admixtures.

2. Article 2301.16, B, Microtexture.

The Office of Materials requests changes to Article 2301.16 that will add a burlap drag to produce a more effective and quieter microtexture.

3. Section 2304, Detour Pavement.

The Office of Design requests several changes to Section 2304 that will add specification language that was previously shown on the Standard Road Plans.

4. Section 2310, Portland Cement Concrete Overlay.

The Office of Materials requests a changes to Section 2310 that will address QC of production concrete and remove the QMC language, thus relying on the QMC specifications for consistency.

5. Article 2403.03, D, Use of Fly Ash and GGBFS.

The Office of Materials requests a change to Article 2403.03 that will clarify the maximum substitution rate for mineral admixtures.

6. Article 2412.02, Materials.

The Office of Materials requests changes to Article 2412.02 that will allow use of blended cements at any time since minimum concrete temperature of 50 deg F for 48 hours have been established.

7. Article 2601.04, C, Application of Seed.

Article 2601.08, D, Finishing Sod.

Article 2601.12, A, Special Ditch Control in Depressed Medians and other Ditch Areas.

Table 4169.02, SEEDS: COMMON NAMES, SCIENTIFIC NAMES, PURITY, & GERMINATION

The Office of Design requests changes to Articles 2601.04, 2601.08, 2601.12, and 4169.02 that will eliminate Kentucky 31 fescue as an acceptable seed.

8. Article 2601.04, K, Spring Overseeding

The Office of Design requests a change to Article 2601.04 that will increase the spring overseeding period from one to two months.

9. Article 4110.04, Mortar Strength

The Office of Materials requests a change to Article 4110.04 that will clarify the number of mortar tests needed annually.

10. Article 4160.01, Description (Wood Preservatives)

The Office of Materials requests changes to Article 4161.01 that will incorporate Copper Naphthenate as an acceptable treatment material.

11. Section 4161, Preservative Treatment.

The Office of Materials requests changes to Section 4161 that will incorporate Copper Naphthenate as an acceptable treatment material and will make changes to the grade stamping requirements.

12. Section 4162, Untreated Timber and Lumber

The Office of Materials requests changes to Section 4162 that will modify the grade stamping requirements.

13. Article 4167.01, Description (Steel Piles)

The Office of Construction requests a change to Article 4167.01 that will update the specification to match the material that is being produced by the steel mills.

14. Article 4169.08, Mulch.

The Office of Design requests changes to Article 4169.08 that will restrict type of hay used for mulch.

15. Article 4169.10, C, Wood Excelsior Mat.

The Office of Design requests changes to Article 4169.10 that will increase the opening of the netting to align with current industry practices for Special Ditch Control & Slope Protection.

16. Change to Using Yellow Highlight Instead of Green.

The Office of Contracts asked the Specifications Section if it is possible to change to yellow highlight rather than green.

17. Bridge Deck Texturing.

The Office of Bridges and Structures asked why texturing on bridge decks was not on the agenda.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger/Todd Hanson	**Office:** Materials	**Item 1**
Submittal Date: January 2004	**Proposed Effective Date:** October 18, 2005	
Article No.: 2301.04 Paragraph E **Title:** Portland Cement Concrete Pavement	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: The Specification Committee approved the recommended text, but initially wanted to leave in "unless otherwise specified in the contracts documents." However, while discussing Item 6, the committee determined this language is unnecessary and the final decision was to strike out "unless otherwise specified in the contract documents."

Specification Section Recommended Text:

2301.04, E, Use of Fly Ash.

Replace the first and second sentences:

~~For Interstate, and Primary, paving, t~~The maximum allowable fly ash substitution rate shall be 20%. ~~For all other projects, the maximum allowable fly ash substitution rate shall be 20% unless otherwise specified in the contract documents.~~

Comments:

Member's Requested Change (Redline/Strikeout):

E. Use of Fly Ash.

~~For Interstate, and Primary, and Secondary paving, t~~The maximum allowable fly ash substitution rate shall ~~not exceed 15%. For all other paving, the fly ash substitution rate shall not exceed~~ be 20%. ~~For all other projects, the maximum allowable fly ash substitution rate shall be 20% unless otherwise specified in the contract documents.~~ Between October 16 and March 15, fly ash substitution will be allowed only when maturity method is used to determine time of opening.

Reason for Revision: Since county and others can refer to Iowa DOT specifications, remove language relating to specific DOT work and non DOT work. If someone wants to use more than 20%, they can write into their specification. We will be limiting that aspect by referring to all other work.

County or City Input Needed (X one)	**Yes**	**No**
Comments:		

Industry Input Needed (X one)			**Yes** X	**No**	
Industry Notified:	**Yes** X	**No**	**Industry Concurrence:**	**Yes** X	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger/Todd Hanson	**Office:** Materials	**Item 2**
Submittal Date: January 2005	**Proposed Effective Date:** October 18, 2005	
Article No.: 2301.16, Paragraph B **Title:** Finishing and Texture, B. Microtexture	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text:

2301.16, B, Microtexture.

Replace the first sentence of the second paragraph:

Artificial turf ~~or~~, coarse carpet, or burlap shall be dragged longitudinally over the finished surface to produce a tight, uniform, textured surface. Burlap may be dampened to prevent adhesion of PCC mixture.

Comments: The Office of Materials explained that with zero blanking band smoothness contractors are likely to ask that using burlap be an option. The Office of Contracts asked if using burlap would be the contractor's option. The Specifications Section stated that this would be the case. The Office of Materials stated that language could be added that the burlap is to be wetted. The Office of Construction raised some concern with the term "wetted". The Office of Materials suggested using the term "damp" instead of "wetted", or perhaps not adding either term. The Office of Construction stated that if no language is added, contractors could leave the burlap dry or have it too wet. They suggested adding a sentence that the burlap may be dampened to prevent adhesion. The Specification Committee agreed.

Specification Section Recommended Text:

2301.16, B, Microtexture.

Replace the first sentence of the second paragraph:

Artificial turf ~~or~~, coarse carpet, or burlap shall be dragged longitudinally over the finished surface to produce a tight, uniform, textured surface.

Comments:

Member's Requested Change (Redline/Strikeout):

B. Microtexture.
Microtexture is constructed to produce a roughened surface on the driving areas of the pavement.

Artificial turf ~~or~~, coarse carpet, or burlap shall be dragged longitudinally over the finished surface to produce a tight, uniform, textured surface.

Reason for Revision: Adding burlap to produce microtexture. Using burlap produces a quieter microtexture for noise concerns. It also affects smoothness, especially when using zero blanking band. Was allowed until 1992 spec book. Also, part of FHWA Technical Advisory on Surface Texture.

County or City Input Needed (X one)			**Yes**	**No** X	
Comments:					
Industry Input Needed (X one)			**Yes** X	**No**	
Industry Notified:	**Yes** X	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments: Industry has been experimenting on pavements placed in 2004. Contractors have used this option in Kansas and Missouri (allowed in both states) where zero blanking band is used for smoothness.					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Mike Kennerly/Will Stein	**Office:** Design	**Item 3**
Submittal Date: February 24, 2005	**Proposed Effective Date:** October 18, 2005	
Article No.: Section 2304 **Title:** Detour Pavement	**Other:**	

Specification Committee Action:

Deferred: X	**Not Approved:**	**Approved Date:**	**Effective Date:**

Specification Committee Approved Text:

Comments: The Office of Local Systems raised some concern with stating pavement thickness in the Specifications. Their thinking is that pavement thickness should be stated in the plans, for example in the Standard Road Plans. The Office of Contracts stated that it is unlikely that designers will want to use the same pavement thickness for all crossovers. The Specification Committee agreed not to include pavement thickness in the Specifications. The committee also agreed that the sentence "The asphalt binder shall be PG 64-22 and Class 1B compaction" should be broken into two sentences: "The asphalt binder shall be PG 64-22. Class 1B compaction shall be used." The committee also agreed to add the word "aggregate" after "friction" in the last sentence. The Office of Design's request for changes will be discussed further at the next Specification Committee meeting.

Specification Section Recommended Text:

2304.01, Description.

Replace the first sentence.

This work shall consist of furnishing and placing a temporary or permanent hard surface composed of PCC or HMA to carry traffic during construction of permanent pavement.

2304.02, A, PCC.

Add as the second paragraph.

For median crossovers, the 9 inch PCC option shall meet the requirements of Section 2301 for Class C PCC Pavement.

2304.02, B, HMA.

Add as the third paragraph.

For median crossovers, the 12 inch HMA option shall meet the requirements of Article 2303.02 for HMA 10,000,000 ESAL base course, 3/4 inch (19 mm). The asphalt binder shall be PG 64-22 and Class 1B compaction. The surface lift requires L-4 friction.

Comments:

Member's Requested Change (Redline/Strikeout):

Section 2304. DETOUR PAVEMENT

2304.01 DESCRIPTION.
Add to paragraph:

This work shall consist of furnishing and placing a temporary or permanent hard surface composed of PCC or HMA to carry traffic during construction of permanent pavement.

2304.02 MATERIALS.

A. PCC.
Add as new second paragraph:

For median crossovers, the 9" PCC option shall meet the requirements of Section 2301 for Class C PCC Pavement.

B. HMA
Add as new third paragraph:

For median crossovers, the 12" HMA option shall meet the requirements of Article 2303.02 for HMA 10,000,000 ESAL base course, ¾ inch (19 mm). The asphalt binder shall be PG 64-22 and class 1B compaction. The surface lift requires L-4 friction.

Reason for Revision: Modify to include specifications for median crossover pavement. Previously, everything (i.e., special backfill, granular shoulder, removal of pavement, removal of granular shoulders, etc.) was incidental to the median crossover pavement bid item. To reduce the number of incidental items, these will now be bid separately, and the median crossover pavement will be bid as Detour Pavement.

County or City Input Needed (X one)	**Yes**	**No** X

Comments: This is not new information. It will just be shown in the Specifications Book instead of the Standard Road Plans.

Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**

Comments: This is not new information. It will just be shown in the Specifications Book instead of the Standard Road Plans.

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger/Todd Hanson	**Office:** Materials	**Item 4**
Submittal Date: September 21, 2004	**Proposed Effective Date:** October 2005	
Article No.: 2310 / SS-01030 **Title:** Portland Cement Concrete Overlay	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text: See Specification Section Recommended text.

Comments: The Specifications Section raised some concern about QMC for quantities less than 50,000 square yards. The Office of Materials explained that Mix Nos. C-3WR andC-4WR address that concern.

Specification Section Recommended Text:

2310.02 Materials.

Replace the entire article:

A. Bonded Overlays.

1. Aggregate.
Unless otherwise specified, the coarse aggregate shall be the same type of aggregate, crushed limestone, or gravel, as the existing pavement. ~~The~~Gradation of coarse aggregate shall ~~have as~~ meet the ~~largest size particle,~~ requirements of Section 4109, Aggregate Gradation Table, Gradation 3 or 5. The nominal maximum coarse aggregate shall be no greater than one-third of the overlay thickness.

2. Concrete.
~~For projects with mainline paving less than 50,000 square yards (40,000 m^2). Gradation~~ Mix No. ~~5, and a~~ C-3WR ~~mixture with or without fly ash,~~ or C-4WR as specified in Materials I.M. 529 shall be used~~. For larger projects, a QM-C design mixture shall be used, as described below:~~

~~**a. Description.**~~
~~The Contractor shall develop a concrete mixture design with an optimum combined aggregate gradation. Optimization of~~ for the ~~aggregates should produce concrete with low water requirement as well as with improved workability and finishing characteristics. While concrete strength is important and shall be measured, it is not the basis for optimization of the concrete mixture design~~ overlay, unless specified otherwise in contract documents.

~~The Concrete Design Mixture (CDM) shall apply to mainline slip form pavement. At the Contractor's option, the CDM may apply to any other slip form paving.~~

~~**b. Coarse and Fine Aggregate.**~~
~~The Gradation Table in Article 4109.01 will not apply to coarse or fine aggregate with the following exceptions: fine aggregate sources shall meet the requirements of Gradation No. 1 for the 3/8 inch (9.5 mm) sieve and the No. 4 (4.75 mm) sieve, except for Class 3I gravel sources.~~

~~A coarse, uncrushed sand may be produced from an approved Class 2 or Class 3 gravel source meeting the quality requirements of Section 4110 and the following gradation limits:~~

Sieve Size	Percent Passing
1/2 inch (12.5 mm)	100
3/8" (9.5 mm)	90-100
No. 4 (4.75 mm)	80-100

c. Intermediate Aggregate.
Any limestone intermediate aggregate material shall meet the durability class required for the coarse aggregate. Intermediate aggregate shall be considered coarse aggregate for gradations and correlations.

Uncrushed pea gravel produced from an approved Class 2 or Class 3 gravel source and meeting the quality requirements of Section 4110 shall not exceed 10% of the total aggregate.

d. Laboratory Design Mixture.
The Contractor shall develop a CDM based on a unit volume of 1.000 according to industry standard practice. The CDM shall contain proportions of materials, including admixtures. Proportions shall be based upon saturated surface dry aggregates and shall produce a workable concrete mixture meeting the following constraints:

Nominal Maximum Coarse Aggregate Size	1/3 the pavement design thickness
Gradation	Materials I.M. 532
Cementitious Content	Minimum, 560 lbs./cy * (333 kg/m^3*)
Fly Ash Substitution Rate	See Article 2301.04, E
Water/Cementitious Ratio	Maximum, 0.45
Target Air Content	6% ± 1%
28 Day Flexural Strength, Third Point	Minimum, 640 psi (4.40 MPa)

*The minimum cement content assumes the use of Type I/II cement with a specific gravity of 3.14 for an absolute volume of 0.106. The absolute volume shall be 0.106 and the weight (mass) of cement shall be determined from the specific gravity of the cement, if other than Type I/II cement. Cement content may need to be increased to maintain water to cementitious ratio during hot weather conditions.

Normal production gradations shall be used to determine the relative percentage of each individual aggregate used in the CDM. The relative percentage of each individual aggregate shall be selected to produce the desired combined aggregate gradation using on the following sieves: 1 inch, 3/4 inch, 1/2 inch, 3/8 inch, No. 4, No. 8, No. 16, No. 30, No. 50, No. 100, and No. 200 (25 mm, 19 mm, 12.5 mm, 9.5 mm, 4.75 mm, 2.36 mm,1.18 mm, 600 µm, 300 µm, 150 µm, and 75 µm). A target combined gradation shall be developed for each CDM based on normal production gradations and the relative percentages of each individual aggregate. Percent passing the No. 200 (75 µm) sieve shall not exceed 1.5% for the combined aggregate gradation. Water reducing admixture, Type A, or water reducing and retarding admixture, Type D, may be used in the CDM.

Laboratory development of the CDM shall be in accordance with AASHTO T 126. Mix designs may be conducted in a ready mix or central mix batch plant provided the following conditions are met:

1) all non-mix design materials are emptied,
2) mix design materials are used, and
3) batch size at least 3 cubic yards (2 m^3).

~~Personnel overseeing the development of the CDM shall be an Iowa DOT PCC Level III Certified Technician. The Engineer shall be allowed to witness the development of the CDM. Notice shall be given 7 calendar days prior to this event. The following tests shall be performed in the development of the CDM:~~

~~Specific Gravity of Each Individual Aggregate~~	~~Materials I.M. 307~~
~~Gradation of Each Individual Aggregate~~	~~Materials I.M. 302~~
~~Unit Weight of Plastic Concrete~~	~~AASHTO T 121~~
~~Air Content of Plastic Concrete~~	~~Materials I.M. 318~~
~~28 Day Flexural Strength~~	~~AASHTO T 97~~
~~Temperature of Plastic Concrete~~	~~ASTM C 1064~~

~~e. Mix Design Documentation.~~

~~At least 7 calendar days prior to the start of paving the Contractor shall submit a CDM report to the District Materials Engineer for approval. Contract extensions will not be allowed due to inadequate or additional CDMs. The CDM report shall include the following:~~

~~Cover Page~~	~~Contractor name~~ ~~Project number~~ ~~Date and location of CDM laboratory development~~ ~~Date Submitted~~ ~~Signature of Contractor representative~~
~~Material Source Information~~	~~Brand~~ ~~Type~~ ~~Source~~
~~Material Proportion Information~~	~~Specific gravity~~ ~~Relative percentage of each individual aggregate~~ ~~Target combined gradation % passing (Materials I.M. 531)~~ ~~Target combined gradation charts (Materials I.M. 532)~~ ~~Design batch weight (mass) (SSD)~~ ~~As mixed batch weight (mass) (SSD)~~
~~Mix Properties~~	~~Unit weight (mass) of plastic concrete~~ ~~Air content of plastic concrete~~ ~~28 day flexural strength~~ ~~Slump~~ ~~Temperature of plastic concrete~~

Comments: This modification will eliminate the need for SS-01030, Supplemental Specifications for Portland Cement Concrete Overlay and move all overlay specification language back into the Standard Specification book via the General Supplemental Specification. The majority of the changes from the SS are in the materials portion of the specification. Refer to the original submitted text for what was actually eliminated from SS-01030 as it is brought into the GS.

Member's Requested Change (Redline/Strikeout):

2310.02 MATERIALS.

A. Bonded Overlays.

1. Aggregate.

Unless otherwise specified, the coarse aggregate shall be the same type of aggregate, crushed limestone, or gravel, as the existing pavement. Gradation of coarse aggregate shall meet the requirements of Section 4109, Aggregate Gradation Table, Gradation 3 or 5. The nominal maximum coarse aggregate shall ~~have as the largest size particle,~~ be no greater than one-third of the overlay thickness.

2. Concrete.

Mix No. C-3WR or C-4WR as specified in Materials I.M. 529 shall be used for the overlay, unless specified otherwise in contract documents. ~~For projects with mainline paving less than 50,000 square yards (40,000 m^2), Gradation No. 5, and a C-3WR mixture, with or without fly ash, shall be used. For larger projects, a QM-C design mixture shall be used, as described below:~~

~~**a. Description.**~~

~~The Contractor shall develop a concrete mixture design with an optimum combined aggregate gradation. Optimization of the aggregates should produce concrete with low water requirement as well as with improved workability and finishing characteristics. While concrete strength is important and shall be measured, it is not the basis for optimization of the concrete mixture design.~~

~~The Concrete Design Mixture (CDM) shall apply to mainline slip form pavement. At the Contractor's option, the CDM may apply to any other slip form paving.~~

~~**b. Coarse and Fine Aggregate.**~~

~~The Gradation Table in Article 4109.01 will not apply to coarse or fine aggregate with the following exceptions: fine aggregate sources shall meet the requirements of Gradation No. 1 for the 3/8 inch (9.5 mm) sieve and the No. 4 (4.75 mm) sieve, except for Class 3I gravel sources.~~

~~A coarse, uncrushed sand may be produced from an approved Class 2 or Class 3 gravel source meeting the quality requirements of Section 4110 and the following gradation limits:~~

~~Sieve Size~~	~~Percent Passing~~
~~1/2 inch (12.5 mm)~~	~~100~~
~~3/8" (9.5 mm)~~	~~90-100~~
~~No. 4 (4.75 mm)~~	~~80-100~~

~~**c. Intermediate Aggregate.**~~

~~Any limestone intermediate aggregate material shall meet the durability class required for the coarse aggregate. Intermediate aggregate shall be considered coarse aggregate for gradations and correlations.~~

~~Uncrushed pea gravel produced from an approved Class 2 or Class 3 gravel source and meeting the quality requirements of Section 4110 shall not exceed 10% of the total aggregate.~~

~~**d. Laboratory Design Mixture.**~~

~~The Contractor shall develop a CDM based on a unit volume of 1.000 according to industry standard practice. The CDM shall contain proportions of materials, including admixtures. Proportions shall be based upon saturated surface dry aggregates and shall produce a workable concrete mixture meeting the following constraints:~~

~~Nominal Maximum Coarse Aggregate Size~~	~~1/3 the pavement design thickness~~
~~Gradation~~	~~Materials I.M. 532~~
~~Cementitious Content~~	~~Minimum, 560 lbs./cy * (333 kg/m*)~~
~~Fly Ash Substitution Rate~~	~~See Article 2301.04 Paragraph E~~
~~Water/Cementitious Ratio~~	~~Maximum, 0.45~~
~~Target Air Content~~	~~6% ± 1%~~
~~28 Day Flexural Strength, Third Point~~	~~Minumum, 640 psi (4.40 MPa)~~

~~*The minimum cement content assumes the use of Type I/II cement with a specific gravity of 3.14 for an absolute volume of 0.106. The absolute volume shall be 0.106 and the weight (mass) of cement shall be determined from the specific gravity of the cement, if other than Type I/II cement. Cement content may need to be increased to maintain water to cementitious ratio during hot weather conditions.~~

Normal production gradations shall be used to determine the relative percentage of each individual aggregate used in the CDM. The relative percentage of each individual aggregate shall be selected to produce the desired combined aggregate gradation using on the following sieves: 1 inch, 3/4 inch, 1/2 inch, 3/8 inch, No. 4, No. 8, No. 16, No. 30, No. 50, No. 100, and No. 200 (25 mm, 19 mm, 12.5 mm, 9.5 mm, 4.75 mm, 2.36 mm,1.18 mm, 600 µm, 300 µm, 150 µm, and 75 µm). A target combined gradation shall be developed for each CDM based on normal production gradations and the relative percentages of each individual aggregate. Percent passing the No. 200 (75 µm) sieve shall not exceed 1.5% for the combined aggregate gradation. Water reducing admixture, Type A, or water reducing and retarding admixture, Type D, may be used in the CDM.

Laboratory development of the CDM shall be in accordance with AASHTO T 126. Mix designs may be conducted in a ready mix or central mix batch plant provided the following conditions are met:

1) all non-mix design materials are emptied,
2) mix design materials are used, and
3) batch size at least 3 cubic yards (2 m^3).

Personnel overseeing the development of the CDM shall be an Iowa DOT PCC Level III Certified Technician. The Engineer shall be allowed to witness the development of the CDM. Notice shall be given 7 calendar days prior to this event. The following tests shall be performed in the development of the CDM:

Specific Gravity of Each Individual Aggregate	Materials I.M. 307
Gradation of Each Individual Aggregate	Materials I.M. 302
Unit Weight of Plastic Concrete	AASHTO T 121
Air Content of Plastic Concrete	Materials I.M. 318
28 Day Flexural Strength	AASHTO T 97
Temperature of Plastic Concrete	ASTM C 1064

e. Mix Design Documentation.
At least 7 calendar days prior to the start of paving the Contractor shall submit a CDM report to the District Materials Engineer for approval. Contract extensions will not be allowed due to inadequate or additional CDMs. The CDM report shall include the following:

Cover Page	Contractor name Project number Date and location of CDM laboratory development Date Submitted Signature of Contractor representative
Material Source Information	Brand Type Source
Material Proportion Information	Specific gravity Relative percentage of each individual aggregate Target combined gradation % passing (Materials I.M. 531) Target combined gradation charts (Materials I.M. 532) Design batch weight (mass) (SSD) As mixed batch weight (mass) (SSD)
Mix Properties	Unit weight (mass) of plastic concrete Air content of plastic concrete 28-day flexural strength Slump Temperature of plastic concrete

Reason for Revision: QMC is automatically added on projects over 50,000 sq. yds. The spec also gave no provisions for how to handle production concrete – only the mix design.

County or City Input Needed (X one)			**Yes**	**No**	
Comments:					
Industry Input Needed (X one)			**Yes** X	**No**	
Industry Notified:	**Yes** X	**No**	**Industry Concurrence:**	**Yes** X	**No**
Comments: Make changes to Article 2310 and eliminate SS-01030					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger/Todd Hanson	**Office:** Materials	**Item 5**
Submittal Date: January 2004	**Proposed Effective Date:** October 2005	
Article No.: 2403.03 Paragraph D **Title:** Structural Concrete	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: The Specification Committee approved the recommended text, but initially wanted to leave in "unless otherwise specified in the contracts documents." However, while discussing Item 6, the committee determined this language is unnecessary and the final decision was to strike out "unless otherwise specified in the contract documents."

Specification Section Recommended Text:

2403.03, D, Use of Fly Ash and GGBFS.

Replace the entire article:

The Contractor may use fly ash or GGBFS as a substitute for a portion of the Portland cement in structural concrete. The fly ash and GGBFS shall meet the requirements of Section 4108. ~~For Interstate, and Primary projects, t~~The maximum allowable substitution rates shall be 20% for fly ash and 35% for GGBFS with a maximum total mineral admixture substitution rate of 50%.~~ For all other projects, the maximum allowable fly ash substitution rate shall be 20% unless other specified in the contract documents.~~

Comments:

Member's Requested Change (Redline/Strikeout):

D. Use of Fly Ash and GGBFS.

The Contractor may use fly ash or GGBFS as a substitute for a portion of the Portland cement in structural concrete. The fly ash and GGBFS shall meet the requirements of Section 4108. ~~For Interstate, and Primary, and Secondary projects, t~~The maximum allowable substitution rates shall be ~~15%~~ 20% for fly ash and 35% for GGBFS~~. For all other projects, the maximum allowable substitution rate shall be 20% for fly ash,~~ with a maximum total mineral admixture substitution rate of 50%. ~~For all other projects, the maximum allowable fly ash substitution rate shall be 20% unless other specified in the contract documents.~~

Reason for Revision: Since county and others can refer to Iowa DOT specifications, remove language relating to specific DOT work and non DOT work. If someone wants to use more than 20%, they can write into their specification. We will be limiting that aspect by referring to all other work.

County or City Input Needed (X one)	**Yes**	**No**

Comments:

Industry Input Needed (X one)			**Yes**	**No**	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger/Todd Hanson	**Office:** Materials	**Item 6**
Submittal Date: January 2004	**Proposed Effective Date:** October 2005	
Article No.: 2412.02 **Title:** New Concrete Floors	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text:

2412.02, Materials.

Replace second paragraph:

Concrete used shall meet the requirements for C-4WR, C-L4WR, and C-V47B concrete mixtures, as specified in Materials I.M. 529. Coarse aggregate Gradation 3 or 5 shall be used. ~~Fly ash and GGBFS substitution will not be permitted in concrete floors placed in the time period from October 16 through March 15.~~ The fly ash and GGBFS shall meet the requirements of Section 4108. ~~For Interstate, Primary, and Secondary projects, t~~The maximum allowable substitution rates shall be as follows:~~15% for fly ash and 35% for GGBFS with a maximum total mineral admixture substitution rate of 50%.~~

Cement Type	**Maximum Allowable Substitution ***	**Time Period**
Type I, Type II	35% GGBFS 15% Fly Ash	March 16 to October 15
Type I(SM), IP, IS	0% GGBFS 15% Fly ash	March 16 to October 15
Type I,II, I(SM), IP	0% GGBFS 0% Fly ash	October 16 to March 15

* Maximum total mineral admixture substitution shall be 50%.

Comments: The Office of Materials explained that a majority of ready mix plants east of I-35 have only one SM as a blended cement available. The Office of Materials wants to accommodate them. They also want to add a table to further clarify the difference between blended cements and replacement cements and to help promote the use of blended cements. The Specification Committee approved the recommended text, but advised that the table needs to have 0% GGBFS added to Type I(SM), IP, IS and needs to have 0% GGBFS and 0% Fly ash added to Type I, II, I(SM), IP.

Specification Section Recommended Text:

2412.02, Materials.

Replace second paragraph:

Concrete used shall meet the requirements for C-4WR, C-L4WR, and C-V47B concrete mixtures, as specified in Materials I.M. 529. Coarse aggregate Gradation 3 or 5 shall be used. ~~Fly ash and GGBFS substitution will not be permitted in concrete floors placed in the time period from October 16 through March 15.~~ The fly ash and GGBFS shall meet the requirements of Section 4108. ~~For Interstate, Primary, and Secondary projects, t~~The maximum allowable substitution rates shall be as follows:~~15% for fly ash and 35% for GGBFS with a maximum total mineral admixture substitution rate of 50%.~~

Cement Type	Maximum Allowable Substitution *	Time Period
Type I, Type II	35% GGBFS 15% Fly Ash	March 16 to October 15
Type I(SM), IP, IS	15% Fly ash	March 16 to October 15
Type I,II, I(SM), IP	0%	October 16 to March 15

* Maximum total mineral admixture substitution shall be 50%.

Comments:

Member's Requested Change (Redline/Strikeout):

2412.02 MATERIALS.
Materials used in concrete floors shall meet requirements for the respective materials in Division 41.

Concrete used shall meet the requirements for C-4WR, C-L4WR, and C-V47B concrete mixtures, as specified in Materials I.M. 529. Coarse aggregate Gradation 3 or 5 shall be used. ~~Fly ash and GGBFS substitution will not be permitted in concrete floors placed in the time period from October 16 through March 15.~~ The fly ash and GGBFS shall meet the requirements of Section 4108. ~~For Interstate, Primary, and Secondary projects, t~~The cement types and maximum allowable substitution rates shall be as follows:~~15% for fly ash and 35% for GGBFS. For all other projects, the maximum allowable substitution rate shall be 20% for fly ash, with a maximum total mineral admixture substitution rate of 50%.~~

Cement Type	Maximum Allowable Substitution *	Time Period
Type I, Type II	35% GGBFS 15% Fly Ash	March 16 to October 15
Type I(SM), IP, IS	15% Fly ash	March 16 to October 15
Type I,II, I(SM), IP	0%	October 16 to March 15

* Maximum total mineral admixture substitution shall be 50%.

Reason for Revision: Allowing use of blended cements at any time since we have minimum concrete temperature of 50 deg F for 48 hours. Many ready mix plants only have Type I(SM) cement. Added benefit of lower permeability by using blended cements. Remove referral to interstate, primary and secondary as in 2301 and 2403.

County or City Input Needed (X one)			**Yes**	**No**	
Comments:					
Industry Input Needed (X one)			**Yes**	**No**	
Industry Notified:	**Yes** X	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Mike Kennerly/Ole Skaar, Jr.	**Office:** Design	**Item 7**
Submittal Date: January 28, 2005	**Proposed Effective Date:** October 18, 2005	
Article No.: 2601.04, C **Title:** Application of Seed **Article No.:** 2601.08, D **Title:** Finishing Sod **Article No.:** 2601.12, A **Title:** Special Ditch Control in Depressed Medians and other Ditch Areas. **Article No.:** Table 4169.02 **Title:** Seeds: Common Names, Scientific Names, Purity, & Germination	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: Roadside Development noted that Kentucky 31 Fescue has the possibility of containing an endophyte that can cause problems with cattle and horses and their reproductive processes. Adjacent properties owners have asked that we not use it in the ROW. The Iowa DOT isn't using Kentucky 31 Fescue anymore, so it needs to be removed from the Specifications

Specification Section Recommended Text:

2601.04, C, Application of Seed.

Replace first line of first indented paragraph.

Fescue, ~~Kentucky, 31 or~~ Fawn 25 lb. Per acre (28 kg/ha)

2601.08, D, Finishing Sod.

Replace first line of indented paragraph following second paragraph.

Fescue, ~~Kentucky 31 or~~ Fawn 80%

2601.12, A. Special Ditch Control in Depressed Medians and Other Ditch Areas.

Replace first line of indented paragraph following first paragraph.

Fescue, ~~Kentucky 31 or~~ Fawn 70%

4169.02

Delete the sixth line of the table.

~~Fescue, tall, KY. 31 Festuca arundinacea-KY. 31 98 85~~

Comments:

Member's Requested Change (DO NOT USE "TRACK CHANGES," use Strikeout/Highlight):

2601.04

CURRENT: Fescue, Kentucky, 31 or Fawn

NEW: Fescue, Fawn

2601.08

CURRENT: Fescue, Kentucky 31 or Fawn 80%

NEW: Fescue, Fawn 80%

2601.12

CURRENT: Fescue, Kentucky 31 or Fawn 70%

NEW: Fescue, Fawn 70%

4169.02

CURRENT: Common Name….Fescue, tall, KY.31

Scientific Name…Festuca arundinacea-KY.31

Pur. (%) 98 Germ.(%) 85

New: Remove common name: Fescue, tall, KY. 31

Remove scienticic name: Festuca arundinacea-KY.31

Remove Pur. (%) 98 and remove Germ.(%) 85

Reason for Revision: The Kentucky 31 Fescue has the possibility of containing an endophyte that can cause problems with cattle and horses and their reproductive processes. We need to remove it from our seed mixtures.

County or City Input Needed (X one)			**Yes**	**No** X	
Comments:					
Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Mike Kennerly/Ole Skaar, Jr.	**Office:** Design	**Item 8**
Submittal Date: February 24, 2005	**Proposed Effective Date:** October 18, 2005	
Article No.: 2601.04 K. **Title:** Spring Overseeding.	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: Roadside Development noted that overseeding in February is allowed if the ground is clear. Roadside Development has been allowing overseeding in February for about the last 15 years. They would like the Specifications to reflect current practice.

Specification Section Recommended Text:

2601.04, K, Spring Overseeding.

Replace the first sentence.

Seedbed preparation will not be required, provided the overseeding is applied when the ground is friable from frost action after February~~March~~ 1 and before April 1 or as directed by the Engineer.

Comments:

Member's Requested Change (DO NOT USE "TRACK CHANGES," use Strikeout/Highlight):

CURRENT: Seedbed preparation will not be required, provided the overseeding is applied when the ground is friable from frost action after March 1 and before April 1 or as directed by the Engineer.

NEW: Seedbed preparation will not be required, provided the overseeding is applied when the ground is friable from frost action after February 1 and before April 1 or as directed by the Engineer.

Reason for Revision: Seed can be applied in February or March – needed more time for more erosion control projects..

County or City Input Needed (X one)	**Yes**	**No** X
Comments:		

Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: J. Berger	**Office:** Materials	**Item 9**
Submittal Date: 02/18/05	**Proposed Effective Date:** October, 2005	
Article No.: 4110.04 **Title: MORTAR STRENGTH.**	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: The Office of Materials noted that the language in this Article is being misinterpreted to mean that mortar strength testing is no longer needed. Removing the third paragraph should resolve this problem. Some sand producers may need to make their material a little courser.

Specification Section Recommended Text:

4110.04, Mortar Strength.

Delete the third paragraph.

~~If the gradation of fine aggregate at the time of production is 80% or less passing the No. 16 (1.18 mm) sieve and 50% or less passing the No. 30 (600 µm) sieve, the aggregate may be considered as complying with mortar strength requirements.~~

Comments:

Member's Requested Change (DO NOT USE "TRACK CHANGES," use Strikeout/Highlight):

4110.04 MORTAR STRENGTH.
Fine aggregate from an approved source shall have an initial mortar strength, determined by Iowa DOT Materials Laboratory Test Method 212, of not less than 1.5 times the strength of mortar in which standard sand is used.

An annual mortar strength test result of not less than 1.5 is required for continued approval of a source with a fineness modulus of less than 2.75 as determined in accordance with AASHTO T 27. The Engineer may require re-approval and additional mortar strength testing for sources where the quality of the sand changes or for sources where there has been a history of change in the quality.

~~If the gradation of fine aggregate at the time of production is 80% or less passing the No. 16 (1.18 mm) sieve and 50% or less passing the No. 30 (600 µm) sieve, the aggregate may be considered as complying with mortar strength requirements.~~

Reason for Revision

The original intent of the third paragraph was to reduce the number of sources that needed to be tested each year for mortar strength. Research had shown that approved sources with coarser gradations normally passed the yearly mortar strength requirement. The second paragraph was recently added to further reduce the number of yearly mortar strength tests. With the addition of the second paragraph, the third is now confusing and somewhat redundant.

There may be only one or two sources that will be affected by the change.					
County or City Input Needed (X one)			**Yes**	**No** X	
Comments:					
Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes**	**No** X	**Industry Concurrence:**	**Yes**	**No** X
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger	**Office:** Materials	**Item 10**
Submittal Date: January, 2005	**Proposed Effective Date:** October 2005	
Article No.: 4160.01 **Title:** Description (Wood Preservatives)	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: The Office of Materials explained that Chromated Copper Arsenate (CCA) has been banned for use in residential areas. They have requested including Copper Naphthenate in the Specifications.

Specification Section Recommended Text:

4160.01, E, Ammoniacal Copper Zinc Arsenate.

Replace the entire article.

E. Ammoniacal Copper Zinc Arsenate.

~~Ammoniacal Copper Zinc Arsenate.~~ Ammoniacal Copper Zinc Arsenate (ACZA) shall conform to the requirements of AASHTO M 133 (AWPA P5).

4160.01, F, Copper Naphthenate.

Add new article.

F. Copper Naphthenate.

Copper Naphthenate shall meet the requirements of AASHTO M 133 (AWPA P8). Petroleum solvent shall meet the requirements of AWPA P9 for Hydrocarbon Solvent Type A.

Comments:

Member's Requested Change (Redline/Strikeout):

4160.01 DESCRIPTION.
Wood preservatives shall meet the requirements for the material specified. Use of this material shall meet the requirements of all Federal, State, and local regulations.

A. Creosote.
Creosote for a wood preservative shall meet requirements of AASHTO M 133 (AWPA P1).

B. Pentachlorophenol.
Pentachlorophenol for a wood preservative shall meet requirements of AASHTO M 133 (AWPA P8). Petroleum solvent shall meet requirements of AWPA P9 for Hydrocarbon Solvent Type A.

C. Chromated Copper Arsenate.
Chromated copper arsenate (CCA) shall conform to the requirements of AASHTO M 133 (AWPA P5),

Type A, Type B, or Type C.

D. Ammoniacal Copper Arsenate.
Ammoniacal copper arsenate (ACA) shall conform to the requirements of AASHTO M 133 (AWPA P5).

E. Ammoniacal Copper Zinc Arsenate.
~~Ammoniacal Copper Zinc Arsenate.~~ Ammoniacal Copper Zinc Arsenate (ACZA) shall conform to the requirements of AASHTO M 133 (AWPA P5).

F. Copper Naphthenate.
Copper Naphthenate shall meet the requirements of AASHTO M133 (AWPA P8). Petroleum solvent shall meet the requirements of AWPA P9 for Hydrocarbon Solvent Type A.

Reason for Revision: allow new type of preservative

County or City Input Needed (X one)			**Yes**	**No**	
Comments:					
Industry Input Needed (X one)			**Yes**	**No**	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger	**Office:** Materials	**Item 11**
Submittal Date: January 2005	**Proposed Effective Date:** October 2005	
Article No.: 4161 **Title:** Preservative Treatment	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text: Article 4161.02, Preservatives, Article 4161.03, Treatment, and Article 4161.03, D, Method of Treatment, see Specification Section Recommended Text.

4161.03, G, Product Marking.

Replace the entire Article:

The individual pieces of inspected, treated material shall bear a legible identification mark either hammer or heat branded, die stamped, or metal tagged. For material treated with waterborne preservatives, the identification mark may be ink stamped provided the information is clearly visible and legible. As a minimum, the identification mark shall indicate the treater, the species of wood, the preservative treatment type, and the retention level. ~~Additionally, the individual pieces of inspected, treated material shall be marked by the treating plant with the treatment charge number.~~ Acceptable brands or marks shall be similar to the general guidelines for brands listed in ~~accordance with~~ APWA M1 and M6 ~~with the addition of the charge number.~~ Branding of piles shall be on the butt end. The charge number shall be included in the markings on all treated piles. ~~When pieces are 2 inches by 2 inches (50 mm by 50 mm) or larger, each piece of inspected and approved material shall be legibly hammer stamped on one or both ends by the treatment inspection agency. This treatment stamp shall identify the treatment inspection agency and the inspector.~~ All treated wood material that requires a grade, with the exception of 45 inch (1145 mm) Terminal Posts[1], shall contain a quality grade mark of an accredited grade monitoring and inspection agency approved under the American Lumber Standards Committee (ALSC).

[1] In the event that Terminal Posts that are 45 inches (1145 mm) in length to be used for Guardrails can not be stamped with a quality grade mark due to sizing of material, Terminal Posts shall then be stamped 'MFG No. 1' to indicate that the Terminal Posts were cut from an original piece graded as a No. 1. Wane requirements will be waived.

Material less than 3 feet (1 m) in length does not require a grade mark; however, a certification statement from the mill/processor certifying the grade of the material shall be provided. See Documentation Section of Materials I.M. 462. Round wood posts, round wood piles, and round wood poles do not require a grade, since the grading rules apply only to sawn material.

In addition, each bundle of treated wood products shall have at least one plastic tag identifying the charge number for the bundle.

Comments: The Office of Materials explained that when wood is graded, it is usually done so in 10 to 14-foot lengths. Afterward, it is cut to required lengths. The Iowa DOT requires guardrail posts to be graded No. 1. Cutting a 10 to 14-foot length of No. 1 graded wood into smaller pieces may result in some pieces not meeting the No.1 grading. The Specifications allow three-foot pieces to be certified as being made from material graded No. 1. The Office of Materials wants to add language to allow 45-inch pieces to be stamped as being manufactured from material graded No. 1. The Office of Materials also explained that treatment plants treat large batches of material and do not know the charge number until after treatment. The material is bundled up before treatment. To place a charge number on each piece requires removing them from the bundle. Since the Iowa DOT is now monitoring the treatment plants, a charge number can be placed on each bundle instead of each piece from a bundle. Treatment plants can

still stamp individual pieces before treating to identify who treated the material and the date the material was treated. Inspectors can look for the stamp on each piece. The Office of Materials requested adding language that will allow one tag that will identify the charge number for a whole bundle.

Specification Section Recommended Text:

4161.02, Preservatives.

Replace the entire article:

Preservatives used for treatment shall meet the requirements of Section 4160. Unless otherwise specified, treatment may be with creosote, pentachlorphenol, copper naphthenate, chromated copper arsenate (CCA), ammoniacal copper arsenate (ACA), or ammoniacal copper zinc arsenate (ACZA).

4161.03, Treatment.

Replace Table 1:

TABLE 1: MINIMUM PRESERVATIVE RETENTION REQUIREMENTS
(lb./cu.ft. of wood)
(kilograms per cubic meter of wood)

	Retention						
Material and Usage	**Creosote [2]**	**Penta-chloro-phenol [2]**	**Copper Napthenate [2]**	**ACA [32]**	**ACZA [32]**	**CCA [1,3]**	**AWPA Material Standard**
Lumber and Timber for Structures	12 (192.2)	0.6 (9.6)	0.075 (1.2)	0.6 (9.6)	0.6 (9.6)	0.6 (9.6)	C2, C14
Piles for Foundation:							
Douglas Fir	17 (272)	-	-	-	-	-	C3, C14
Southern Pine	12 (192.2)	-	-	-	-	-	
Post, Guardrail, & Spacer Blocks:							
Sawed Four Sides	12 (192.2)	0.6 (9.6)	0.075 (1.2)	0.5~~6~~ (8.0~~9.6~~)	0.5~~6~~ (8.0~~9.6~~)	0.5~~6~~ (8.0~~9.6~~)	C2, C14
Posts, Fence, Guide, and Sign:							
Round	8 (128)	0.4 (6.4)	0.055 (0.88)	0.4 (6.4)	0.4 (6.4)	0.4 (6.4)	C5, C14
Sawed Four Sides	10 (160)	0.5 (8.0)	0.060 (0.96)	0.4~~5~~ (6.4~~8.0~~)	0.4 (6.4)	0.4 (6.4)	C2, C14

NOTE: [1] CCA shall not be used for the treatment of Douglas Fir.
[2] Oil type preservatives
[3] CCA, ACA, and ACZA are waterborne preservatives.

4161.03, D, Method of Treatment.

Replace the entire Article:

The preservative used shall be the same for all the product furnished for each contract item or order. Unless otherwise specified, treatment with creosote oil, ~~or~~ pentachlorophenol, or copper naphthenate solution shall be made by the empty cell process with initial air pressure. Treatment with waterborne preservative shall be made by the full cell process.

4161.03, G, Product Marking.

Replace the entire Article:

The individual pieces of inspected, treated material shall bear a legible identification mark either hammer or heat branded, die stamped, or metal tagged with waterborne preservatives, the identification mark may be ink stamped provided the information is clearly visible and legible. As a minimum, the identification mark shall indicate the treater, the species of wood, the preservative treatment type, and the retention level. ~~Additionally,~~

~~the individual pieces of inspected, treated material shall be marked by the treating plant with the treatment charge number.~~ Acceptable brands or marks shall be similar to the general guidelines for brands listed in ~~accordance with~~ APWA M1 and M6 ~~with the addition of the charge number.~~ Branding of piles shall be on the butt end. The charge number shall be included in the markings on all treated piles. ~~When pieces are 2 inches by 2 inches (50 mm by 50 mm) or larger, each piece of inspected and approved material shall be legibly hammer stamped on one or both ends by the treatment inspection agency. This treatment stamp shall identify the treatment inspection agency and the inspector.~~ All treated wood material that requires a grade, with the exception of 45 inch Terminal Posts[1], shall contain a quality grade mark of an accredited grade monitoring and inspection agency approved under the American Lumber Standards Committee (ALSC).

[1] In the event that Terminal Posts that are 45 inches in length to be used for Guardrails can not be stamped with a quality grade mark due to sizing of material, Terminal Posts shall then be stamped 'MFG No. 1' to indicate that the Terminal Posts were cut from an original piece graded as a No. 1. Wane requirements shall be waived.

Material less than 3 feet in length does not require a grade mark; however, a certification statement from the mill/processor certifying the grade of the material shall be provided. See Documentation Section of Materials I.M. 462. Round wood posts, round wood piles, and round wood poles do not require a grade, since the grading rules apply only to sawn material.

In addition, each bundle of treated wood products shall have at least one plastic tag identifying the charge number for the bundle.

Comments:

Member's Requested Change (Redline/Strikeout):

4161.02, PRESERVATIVES.
Preservatives used for treatment shall meet requirements of Section 4160. Unless otherwise specified, treatment may be with creosote, pentachlorophenol, copper naphthenate, chromated copper arsenate (CCA), ammoniacal copper arsenate (ACA), or ammoniacal copper zinc arsenate (ACZA).

4161.03 TREATMENT.
Except as provided herein, preservative treatment shall be in accordance with requirements and recommendations of AWPA Standard C1 and the applicable AWPA Commodity Standards listed in the following table for various materials and usages:

TABLE 1: MINIMUM PRESERVATIVE RETENTION REQUIREMENTS
(lb./cu.ft. of wood)
(kilograms per cubic meter of wood)

	Retention						
Material and Usage	**Creosote (2)**	**Penta-chloro-phenol (2)**	**Copper Naphthenate (2)**	**ACA (3)**	**ACZA (3)**	**CCA (1)(3)**	**AWPA Material Standard**
Lumber and Timber for Structures	12 (192.2)	0.6 (9.6)	0.075 (1.2)	0.6 (9.6)	0.6 (9.6)	0.6 (9.6)	C2, C14
Piles for Foundation:							
Douglas Fir	17 (272)	-	-	-	-	-	C3, C14
Southern Pine	12	-	-	-	-	-	

	(192.2)						
Post, Guardrail, and Spacer Blocks: Sawed Four Sides	12 (192.2)	0.6 (9.6)	0.075 (1.2)	0.65 (9.68.0)	0.65 (9.68.0)	0.65 (9.68.0)	C2, C14
Posts, Fence, Guide, and Sign: Round	8 (128)	0.4 (6.4)	0.055 (0.88)	0.4 (6.4)	0.4 (6.4)	0.4 (6.4)	C5, C14
Sawed Four Sides	10 (160)	0.5 (8.0)	0.060 (0.96)	0.4 (6.4)	0.4 (6.4)	0.4 (6.4)	C2, C14

NOTE: (1) CCA shall not be used for the treatment of Douglas Fir.
(2) Oil type preservatives
(3) CCA, ACA, and ACZA are waterborne preservatives.

TABLE 2: MINIMUM PRESERVATIVE PENETRATION REQUIREMENTS inches (mm) of wood and/or % of sapwood penetration

	Penetration		
Material and Usage	**Southern Pine**	**Douglas Fir**	**AWPA Material Standard**
Lumber and Timber for Structures	2.5 in. (63 mm) or 85%	**Under 5 in. (125 mm) thick:** 0.4 in. (10 mm) and 90% **5 in. (125 mm) and thicker:** 0.5 in (13 mm) and 90%	C2, C14
Piles for Foundation:	2.5 in. (63 mm) or 85%	0.75 in. (19 mm) and 85% up to 1.6 in. (0 mm) and 85%	C3, C14
Post, Guardrail, and Spacer Blocks: Sawed Four Sides	2.5 in. (63 mm) or 85%	**Under 5 in. (125 mm) thick:** 0.4 in. (10 mm) and 90% **5 in. (125 mm) and thicker:** 0.5 in. (13 mm) and 90%	C2, C14
Posts, Fence, Guide, and Sign: Round	2.0 in. (50 mm) or 85%	3/8 in. (9 mm) and 100% up to 1 in. (25 mm) or 85%	C5, C14
Sawed Four Sides	2.0 in. (50 mm) 0r 85%	**Under 5 in. (125 mm) thick:** 0.4 in. (10 mm) and 90% **5 in. (125 mm) and thicker:** 0.5 in. (13 mm) and 90%	C2, C14

Other aspects of the treatment process shall meet the following requirements:

A. Incising.
Coastal Douglas Fir lumber shall be incised.

B. Seasoning.
When sawed material is treated with waterborne preservatives (CCA), ACA, ACZA), the moisture content prior to treatment, as determined by resistance type moisture meter, shall not be more than 20% if kiln dried or not more than 23% if air dried. The moisture content shall be measured at a depth equivalent to the required penetration up to a maximum of 1.5 inches (38 mm). Unless otherwise specified, lumber 2 inches (50 mm) or less in nominal thickness that is treated with a waterborne preservative shall be dried after treatment to a moisture content of not more than 20% if kiln dried or not more than 23% if air dried.

Before being removed from the treatment cylinder, sign and guardrail posts shall be further subjected to live steam at a maximum pressure of 13 psi (90 kPa), and following that, to an additional period of vacuum to insure that the surface of the wood is free from accumulation of oil type preservative.

D. Method of Treatment.
The preservative used shall be the same for all the product furnished for each contract item or order. Unless otherwise specified, treatment with creosote oil, ~~or~~ pentachlorophenol, or copper naphthenate solution shall be made by the empty cell process with initial air pressure. Treatment with waterborne preservative shall be made by the full cell process.

E. Results of Treatment
Unless otherwise specified, retention and penetration of preservatives shall be in conformance with the above tables. Preservative retentions shall be determined by assay method. Other treatment requirements shall be in accordance with AWPA Standard C1 and the applicable AWPA Commodity Standards listed in the above tables.

F. Handling Treated Products.
Care and handling of preservative treated wood products shall be in accordance with AWPA Standard M4.

G. Product Marking.
The individual pieces of inspected, treated material shall bear a legible identification mark either hammer or heat branded, die stamped, or metal tagged. For material treated with waterborne preservatives, the identification mark may be ink stamped provided the information is clearly visible and legible. As a minimum, the identification mark shall indicate the treater, the species of wood, the preservative treatment type, and the retention level. ~~Additionally, the individual pieces of inspected, treated material shall be marked by the treating plant with the treatment charge number.~~ Acceptable brands or marks shall be similar to the general guidelines for brands listed in ~~accordance with~~ AWPA M1 and M6 ~~with the addition of the charge number.~~ Branding of piles shall be on the butt end. The charge number shall be included in the markings on all treated piles. ~~When pieces are 2 inches by 2 inches (50 mm by 50 mm) or larger, each piece of inspected and approved material shall be legibly hammer stamped on one or both ends by the treatment inspection agency. This treatment stamp shall identify the treatment inspection agency and the inspector.~~ All treated wood material that requires a grade, with the exception of 45 inch Terminal Posts[1], shall contain a quality grade mark of an accredited grade monitoring and inspection agency approved under the American Lumber Standards Committee (ALSC).

[1] In the event that Terminal Posts that are 45 inches in length to be used for Guardrails can not be stamped with a quality grade mark due to sizing of material, Terminal Posts shall then be stamped **MFG No. 1** to indicate that the Terminal Posts were cut from an original piece graded as a No. 1. Wane requirements shall be waived.

Material less than three (3) feet in length does not require a grade mark; however, a certification statement from the mill/processor certifying the grade of the material shall be provided. See Documentation Section of IM 462. Round wood posts, round woodpiles, and round wood poles do not require a grade, since the grading rules apply only to sawn material.

In addition, each bundle of treated wood products shall have at least one plastic tag identifying the charge number for the bundle.

H. Inspection.
White and treatment inspections, certifications, and test reports for each shipment shall be furnished in accordance with Materials I.M. 462.

Reason for Revision: Incorporation new approved treatment and changes to grade stamping of material.

County or City Input Needed (X one)	**Yes**	**No**
Comments:		

Industry Input Needed (X one)			**Yes**	**No**	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Jim Berger	**Office:** Materials	**Item 12**
Submittal Date: January 2005	**Proposed Effective Date:** October 2005	
Article No.: 4162 **Title:** Untreated Timber and Lumber	**Other:**	

Specification Committee Action:			
Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-180-05

Specification Committee Approved Text:

4162.06, Stress Grade Timber and Lumber.

Replace Table 4162.06B:

TABLE 4162.06B

Common Class*	**Grade**
Light Framing:	
Douglas Fir	No. 2
Southern Pine	No. 2 Dense
Joists and Plank:	
Douglas Fir	No. 1
Southern Pine	Dense Structural 65
Posts and Timbers:	
Douglas Fir	Select Structural
Southern Pine	Dense Structural 65

*Common class is based on a nominal extreme fiber stress in bending of 1,500 psi (10.3 MPa) (minimum 1,450 psi (10 MPa)) for light framing and joists and plank in a repetitive member use. Common class for posts and timbers is based on a compression stress parallel to grain of 1,000 psi (7 MPa) when used as a column; when used as a beam in single member use, the minimum extreme fiber stress in bending is 1,450 psi (10 MPa). Use is assumed in a location where the moisture content will not exceed 19% for an extended period of time. Treatment for durability (Section 4161) is also assumed, where ~~appropriate~~ specified.

Replace the third and fourth pargraphs:

Untreated wood material that requires a grade, with the exception of 45 inch (1145 mm) Terminal Posts, shall be stamped with the identifying quality grade mark of an accredited grade monitoring and inspection agency approved by the American Lumber Standards Committee (ALSC) under the Untreated Wood Program. 45 inch (1145 mm) Terminal Posts to be used for guardrail that cannot be stamped with a quality grade mark due to sizing of material, shall be stamped 'MFG No. 1' to indicate that the posts were cut from an original piece graded as a No. 1. Wane requirements will be waived.

~~When material is resized to shorter lengths, and the quality grade mark is no longer available, the lumber mill/processor shall certify the grade of the material.~~

Comments: The Office of Materials asked that we change the text in Table 4162.06B as shown in Members Requested Change. The Office of Local Systems noted that metric units need to be added. The Specifications Section agreed to accommodate both requests.

Specification Section Recommended Text:

4162.03 MINIMUM ACCEPTABLE SIZES.

Replace the first sentence of the first paragraph:

All material furnished shall conform to the dimensions specified for ~~either~~ rough, or surfaced~~, or surfaced hit-or-miss~~ stock.

4162.03, A, Manufacture.

Replace the first sentence:

All pieces shall be fully milled and processed ~~well manufactured~~, and unless otherwise specified, all ends shall be neatly cut at right angles to the longest dimension, and to a length not less than the length designated.

4162.06, Stress Grade Timber and Lumber.

Replace the third and fourth pargraphs:

Untreated wood material that requires a grade, with the exception of 45 inch Terminal Posts, shall be stamped with the identifying quality grade mark of an accredited grade monitoring and inspection agency approved by the American Lumber Standards Committee (ALSC) under the Untreated Wood Program. 45 inch Terminal Posts to be used for guardrail that cannot be stamped with a quality grade mark due to sizing of material, shall be stamped 'MFG No. 1' to indicate that the posts were cut from an original piece graded as a No. 1. Wane requirements will be waived.

~~When material is resized to shorter lengths, and the quality grade mark is no longer available, the lumber mill/processor shall certify the grade of the material.~~

Comments:

Member's Requested Change (Redline/Strikeout):

4162.01 GENERAL REQUIREMENTS.
All timber parts, which in their position in the structure support definite traffic loads, namely posts of framed bents and stringers, shall be structural class timber. All other timber parts, including caps, backing plank, floor plank, wing plank, nailers, fillers, sway bracing, rail posts, post blocks, bridging curbs, scupper blocks, rails, and laminated floor, unless otherwise designated, shall be common class timber and lumber.

Inspection arrangements shall be in accordance with Materials I.M. 462. The cost of inspection shall be included in the unit price bid for the material specified.

4162.02 RESERVED.

4162.03 MINIMUM ACCEPTABLE SIZES.
All material furnished shall conform to the dimensions specified for ~~either~~ rough, or surfaced~~, or surfaced hit-or-miss~~ stock. Unless otherwise specified in the contract documents, rough material shall be furnished. Materials are classified as follows, according to use:

LIGHT FRAMING:	
Nominal thickness Nominal widths Dressed thickness Dressed widths	2" to 4" (50 mm to 100 mm) 2" to 4" (50 mm to 100 mm) S1S or S2S S1E or S2E
JOIST AND PLANK:	
Nominal thickness Nominal widths Dressed thickness Dressed widths Rough	2", 3", and 4" (50 mm, 75 mm, and 100 mm) 6" (150 mm) and wider in multiples of 2" (50 mm) S1S or S2S S1E or S2E
BEAMS AND STRINGERS:	
Nominal thickness Nominal widths Dressed sizes Rough	5" (125 mm) and thicker, rectangular Widths more than 2" (50 mm) greater than thickness S1S, S1E, S2S, or S4S

A. Manufacture.
All pieces shall be fully milled and processed ~~well manufactured~~, and unless otherwise specified, all ends shall be neatly cut at right angles to the longest dimension and, to a length not less than the length designated. Miscut, tapered, wedge cut, or bull end pieces shall be rejected.

B. Dimensions.
Material for tongue and groove bridge floors shall have the dimensions specified or approved by the Engineer. Unless otherwise specified, the dimensions of all other material shall be in accordance with the industry standards approved by the Board of Review of the American Lumber Standards Committee for rough or surfaced stock, as specified, for the species furnished.

4162.04 SPECIES OF WOOD.
The species of wood used in all structural class parts and in all common class timber parts with a nominal thickness of 2 inches (50 mm) and over shall be Douglas Fir (coast region) or Southern Pine. Construction parts less than a nominal thickness of 2 inches (50 mm), including all boards, strips, and sheathing may be Douglas Fir (coast region), Southern Pine, West Coast Hemlock, Ponderosa Pine, Idaho White Pine, Sugar Pine, or White Fir.

4162.05 DEFINITION OF TERMS.
Terms used in these specifications shall be interpreted in accordance with ASTM D 9 and the grading rules approved by the Board of Review of the American Lumber Standards Committee.

4162.06 STRESS GRADE TIMBER AND LUMBER.
Material furnished under this specification shall be either Douglas Fir (coast region) or Southern Pine. The material shall be graded as provided in ASTM D 245 and by the grading rules of associations as approved by the American Lumber Standards Committee.

Material shall be of the grade specified for each species. Douglas Fir (Coastal Region) shall be graded according to the grading rules published by the Western Wood Products Association or the West Coast Lumber Inspection Bureau. Southern Pine shall be graded according to the grading rules published by the Southern Pine Inspection Bureau. When a stress grade is identified as structural, Table 4162.06A shall apply. When a stress grade is identified as common class, Table 4162.06B shall apply. Unless otherwise specified, the material may be either Douglas Fir or Southern Pine.

TABLE 4162.06A

Structural Class*	**Grade**
Light Framing:	
Douglas Fir	Dense No. 2
Southern Pine	No. 2 Dense
Joists and Plank:	
Douglas Fir	Select Structural or Dense No. 1
Southern Pine	Dense Structural 72
Beams and Stringers:	
Douglas Fir	Dense Select Structural
Southern Pine	Dense Structural 86
Posts and Timbers:	
Douglas Fir	Dense Select Structural
Southern Pine	Dense Structural 72

*Structural class is based on a nominal extreme fiber stress in bending of 1,900 psi (13 MPa) (minimum 1,850 psi (12.8 MPa)) for light framing and joists and plank in a repetitive member use and for beams and stringers in a single member use. Structural class for posts and timbers is based on a compression stress parallel to grain of 1,100 psi (7.6 MPa) when used as a column; when used as a beam in a single member use, the minimum extreme fiber stress in bending is 1,750 psi (12 MPa). Use is assumed in a location where the moisture content will not exceed 19% for an extended period of time. Treatment for durability (Section 4161) is also assumed, where specified.

TABLE 4162.06B

Common Class*	**Grade**
Light Framing:	
Douglas Fir	No. 2
Southern Pine	No. 2 Dense
Joists and Plank:	
Douglas Fir	No. 1
Southern Pine	Dense Structural 65
Posts and Timbers:	
Douglas Fir	Select Structural
Southern Pine	Dense Structural 65

*Common class is based on a nominal extreme fiber stress in bending of 1,500 psi (10.3 MPa) (minimum 1,450 psi (10 MPa)) for light framing and joists and plank in a repetitive member use. Common class for posts and timbers is based on a compression stress parallel to grain of 1,000 psi (7 MPa) when used as a column; when used as a beam in single member use, the minimum extreme fiber stress in bending is 1,450 psi (10 MPa). Use is assumed in a location where the moisture content will not exceed 19% for an extended period of time. Treatment for durability (Section 4161) is also assumed, where ~~appropriate~~ specified.

Untreated wood material that requires a grade, with the exception of 45 inch Terminal Posts [1] shall be stamped with the identifying quality grade mark of an accredited grade monitoring and inspection agency approved by the American Lumber Standards Committee (ALSC) under the Untreated Wood Program.

[1] In the event that Terminal Posts that are 45 inches in length to be used for Guardrails can not be stamped with a quality grade mark due to sizing of material, Terminal Post shall then be stamped **MFG No. 1** to indicate that the Terminal Posts were cut from an original piece graded as a No. 1. Wane requirements shall be waived. ~~When material is resized to shorter lengths, and the quality grade mark is no longer available, the lumber mill/processor shall certify the grade of the material.~~

NOTE: Material less than three (3) feet in length does not require a grade mark; however, the grade of the material shall be certified by a certification statement from the mill/processor (as described in the Documentation Section of IM 462). Round wood posts, round wood piles, and round wood poles do not require a grade, since the grading rules apply only to sawn material.

4162.07 COMMON BOARD AND SHEATHING.
Common lumber less than a nominal 2 inches (50 mm) in thickness shall conform to the requirements of the American Lumber Standards for the species and grade specified.

Reason for Revision: Update information for proposed changes to grade stamping of material.

County or City Input Needed (X one)			**Yes**	**No**	
Comments:					
Industry Input Needed (X one)			**Yes**	**No**	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**

Comments:

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: John Smythe / Kyle Frame	**Office:** Construction	**Item 13**
Submittal Date: 2/10/05	**Proposed Effective Date:** 10/05	
Article No.: 4167.01 **Title:** Description (Steel Piles)	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text:

4167.01, Description

Replace the first sentence of the first paragraph.

Steel H-piles shall be rolled from steel meeting requirements of ASTM A 572/A 572M Grade 50 (345) ~~A 36/A 36M~~ and shall have ~~the approximate~~ cross section dimensions meeting requirements of ASTM A 6/A 6M ~~required~~ for the section number designated.

Comments: The Office of Construction explained that the wave equation analysis is based on Grade A 36 steel since the Specifications still allow it. The analysis often reveals stress issues, and the Central office must notify the field office to verify that Grade 50 steel being used. This is extra work for both the field and the central office. Since grade 50 is what is commonly provided, the Specifications should be changed to be consistent with what is being provided.

Specification Section Recommended Text:

4167.01, Description

Replace the first sentence of the first paragraph.

Steel H-piles shall be rolled from steel meeting requirements of ASTM A 572/A 572A Grade 50 (345) ~~A 36/A 36M~~ and shall have ~~the approximate~~ cross section dimensions meeting requirements of ASTM A 6/A 6M ~~required~~ for the section number designated.

Comments:

Member's Requested Change (DO NOT USE "TRACK CHANGES," use Strikeout/Highlight):

Replace the first sentence of the first paragraph:

~~Steel H-piles shall be rolled from steel meeting requirements of ASTM A 36/A 36M and shall have the approximate cross section dimensions required for the section number designated.~~

Steel H-piles shall be rolled from steel meeting requirements of ASTM A 572/A 572M grade 50(345) and shall have cross section dimensions meeting requirements of ASTM A 6/A 6M for the section number designated.

Reason for Revision:

Update the specification to match the material that is being produced by the steel mills and used for construction.

County or City Input Needed (X one)			**Yes** X	**No**	
Comments: Counties may use our specification for steel piles.					
Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Mike Kennerly/Ole Skaar, Jr.	**Office:** Design	**Item 14**
Submittal Date: January 28, 2005	**Proposed Effective Date:** October 18, 2005	
Article No.: 4169.08 **Title:** Mulch	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text: See Specification Section Recommended Text.

Comments: None.

Specification Section Recommended Text:

4169.08, Mulch.

Replace the first sentence:

Material used as mulch may consist of ~~threshed or unthreshed hay,~~ threshed or unthreshed prairie hay, threshed cereal straw, wood excelsior, wood cellulose, or other material, as specified.

Comments:

Member's Requested Change (DO NOT USE "TRACK CHANGES," use Strikeout/Highlight):

CURRENT: Material used as mulch may consist of threshed or unthreshed hay, threshed or unthreshed prairie hay, threshed cereal straw, wood excelsior, wood cellulose, or other material, as specified.

NEW: Material used as mulch may consist of threshed or unthreshed prairie hay, threshed cereal straw, wood excelsior, wood cellulose, or other material as specified.

Reason for Revision: We do not allow alfalfa hay for use on DOT projects because it becomes brittle when dry, and does not tuck into the soil, thereby washing or blowing away. This leaves us with poor soil cover and increased possibility of erosion and sediment pollution.

County or City Input Needed (X one)			**Yes**	**No** X	
Comments:					
Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

SPECIFICATION REVISION SUBMITTAL FORM

Submitted by: Mike Kennerly/Ole Skaar, Jr.	**Office:** Design	**Item 15**
Submittal Date: January 28, 2005	**Proposed Effective Date:** October 18, 2005	
Article No.: 4169.10 **Title:** Special Ditch Control and Slope Protection	**Other:**	

Specification Committee Action:

Deferred:	**Not Approved:**	**Approved Date:** 3-10-05	**Effective Date:** 10-18-05

Specification Committee Approved Text:

4169.10, C, Wood Excelsior Mat.

Replace the second sentence of the indented paragraph:

The top side of the mat shall be covered with a polypropylene netting with a ~~3/8 inch by 3/8 inch (9.5 mm by 9.5 mm)~~ 1/2 inch by 1/2 inch (12.5mm by 12.5 mm) mesh attached with cotton thread.

Comments: Roadside Development contacted their suppliers on the approved product list and discovered they are providing ½ inch by ½ inch mesh. The ½ inch by ½ inch mesh performs satisfactorily. Roadside Development would like to change the Specifications to match what is being provided. The Office of Contracts noted that since the material is only manufactured in English units, 13 mm by 13 mm will not meet the Specifications. The Specifications Section advised using a soft conversion. The Specification Committee agreed to use 12.5 mm by 12.5 mm.

Specification Section Recommended Text:

4169.10, C, Wood Excelsior Mat.

Replace the second sentence of the indented paragraph:

> The top side of the mat shall be covered with a polypropylene netting with a ~~3/8 inch by 3/8 inch (9.5 mm by 9.5 mm)~~ 1/2 inch by 1/2 inch (13mm by 13 mm) mesh attached with cotton thread.

Comments:

Member's Requested Change (DO NOT USE "TRACK CHANGES," use Strikeout/Highlight):

CURRENT: The top side of the mat shall be covered with a polypropylene netting with a 3/8 inch by 3/8 inch (9.5 mm by 9.5 mm) mesh attached with cotton thread.

NEW: The top side of the mat shall be covered with a polypropylene netting with a ½ inch by ½ inch (13mm by 13 mm) mesh attached with cotton thread.

Reason for Revision: The change from 3/8 inch x 3/8 inch, to ½ inch x ½ inch, is needed because the industry has been using ½ inch x ½ inch for the past 10 years and it has performed satisfactorily on DOT projects. The companies providing the products for the DOT work evidently decided the change was minor enough that they never submitted the change to us.

County or City Input Needed (X one)	**Yes**	**No** X

Comments:					
Industry Input Needed (X one)			**Yes**	**No** X	
Industry Notified:	**Yes**	**No**	**Industry Concurrence:**	**Yes**	**No**
Comments:					

Change to Using Yellow Highlight Instead of Green — Item 16

The Office of Contracts asked the Specifications Section if they would consider changing to yellow highlight rather than green. The AGC has indicated that when they try to fax documents with green highlight, the highlight comes out black. The Office of Contracts currently publishes changes in the Construction Manual using yellow highlight. Reproduction has no problems with it. The Specifications Section agreed to investigate. They will try other colors and determine what effect faxing and photocopying documents has on the highlighting. In the meantime, committee members should continue to send their requests for changes to the Specifications Section using the green highlight.

Bridge Deck Texturing — Item 17

The Office of Bridges and Structures asked why texturing on bridge decks was not on the agenda. The Specifications Section explained that the issue was not added because John Adam was not going to be present at the meeting. The Office of Materials noted that the request for the change in how we texture bridge decks may have been driven by noise issues. The Specifications Section explained that the item will be added to a future meeting when John Adam is able to attend.